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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,624	12/19/2000	Julian D. Warhurst	107047-0003	9878

24267 7590 02/02/2004

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EXAMINER

QUAN, ELIZABETH S

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,624

Applicant(s)

WARHURST ET AL.

Examiner

Elizabeth Quan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2002/0039545 to Hall et al. in view of U.S. Patent No. 5,056,427 to Sakabe.

Hall et al. disclose a cover assembly for a microplate (5) (figs. 1 and 2). The assembly comprises a layer of material (23) and cover (1) (figs. 1 and 2). The layer of material is shaped and dimensioned to removably seal a plurality of well openings of the microplate (sections [0010]-[0013]). The cover has a top and first and second sides (figs. 1 and 2). The top is shaped so as to generate the compressive force when the cover is engaged with the microplate (sections [0012], [0031]-[0033]). The top includes a central, longitudinally extending portion and lateral portions extending upwardly from the central portion at their inner edges (figs. 5 and 6). The sides extend downwardly from the outer edges of the lateral portions, such that the lateral portions and central portion provide a resilient force that bears downward on the layers beneath it and upward on the bottom edges of the microplate (figs. 3, 5, 6, 9, 10; sections [0012], [0031]). The first and second sides each include an inward projection (15) for supporting the bottom edge of the microplate (figs. 5-8; section [0032]). A plurality of vertical tabs (17) extends downward from the projections (figs. 5-8, 14, 15; sections [0029], [0032], [0033]). A plurality of recesses (13) in the cover assembly registers with the tabs, such that a plurality of the cover assemblies can be stacked with the vertical tabs of each cover assembly extend down into the recesses of a cover assembly that is disposed beneath (figs. 14 and 15; sections [0027], [0028], [0032],

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[0033]). Longitudinal tabs with locator holes (11) extend from the first and second sides such that the cover may be disengaged from or engaged with the microplate by displacing the longitudinal tabs with locator holes laterally outwardly or inwardly to move the projections away from or beneath the bottom edges of the microplate (figs. 3, 5, 6, 10, 11; sections [0029]-[0033]).

Hall et al. fail to disclose a pressure plate disposed on the layer of material for dispersing a compressive force in a generally uniform manner across the layer of material. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cover assembly of Hall et al. to include a pressure plate, which is contacted by and pressed downward by the cover, disposed on the layer of material for improving the sealing of the plurality of well openings to prevent evaporation of liquid in the well openings and serve as a heat-distributing plate as taught by Sakabe (col. 1, lines 15-17, 53-59, 66-68; col. 2, lines 1-6, 44-48; col. 3, lines 8, 14-20, 30-41). Note: The pressure plate is capable of dispersing a compressive force in a generally uniform manner across the layer of material. It appears the limitation is intrinsic to the pressure. Furthermore, the limitation is considered a process limitation, which is accorded no patentable weight in device claims, since it does not result in a structural difference between the claimed and prior art invention.

3. Claims 2, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0039545 to Hall et al. in view of U.S. Patent No. 5,056,427 to Sakabe et al. as applied to claims 1 and 11-17 above, and further in view of U.S. Patent No. 6,372,144 to Vassarotti and U.S. Patent No. 5,935,277 to Autenrieth et al. and U.S. Patent No. 5,108,603 to Schuette.

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Hall et al. in view of Sakabe et al. do not disclose a pressure plate with one or more horizontal tabs extending generally parallel to the top and sides of the cover thereby enabling the cover to be engaged with or disengaged from the microplate by a robotic system. According to Merriam-Webster's Collegiate Dictionary, plate is defined as a smooth flat thin piece of material, and pressure is defined as the action of a force against an opposing force or to apply pressure to. It follows that a pressure plate is defined as a smooth flat thin piece of material that performs the action of a force against an opposing force or applies pressure to. A search of the prior art reveals that a pressure plate could be resilient material, such as a gasket, as disclosed in Vassarotti (see COL. 4, lines 57-60). Autenrieth et al. disclose an axially movable reaction space wall in the form of a perforated movable pressure plate (4) made of a sheet metal material (see FIGS. 1-3; COL. 3, lines 48-52). Schuette discloses that gasket (118) with one or more horizontal tabs (418) extending generally parallel to the top and sides of the cover thereby enabling the cover to be easily engaged with or disengaged from the microplate by a robotic system (see FIGS. 1 and 4A; COL. 7, lines 31-37 and 64-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cover assembly of Hall et al. in view of Sakabe et al. to provide one or more horizontal tabs on the pressure plate as in Vassarotti and Autenrieth et al. and Schuette for easy removal of the pressure plate from the microplate.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2002/0039545 to Hall et al. in view of U.S. Patent No. 5,056,427 to Sakabe et al. as applied to claims 1 and 11-17 above, and further in view of U.S. Patent No. 6,486,401 to Warhurst et al.

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or U.S. Patent No. 6,426,050 to Pham et al. or U.S. Patent No. 6,254,833 to Shumate et al. or U.S. Patent No. 6,361,746 to Wlodarski.

Hall et al. in view of Sakabe et al. do not disclose the first and second sides of the cover with apertures rendering at least portions of the side surfaces of the microplate visible when the cover is engaged with the microplate. Warhurst et al. show the first and second sides of the cover with apertures rendering at least portions of the side surfaces of the microplate visible when the cover is engaged with the microplate, as indicated in FIG. 3A. Shumate et al. also show apertures on the first and second sides of the cover making portions of the side surfaces of the microplate visible when the cover is engaged with the microplate (see FIGS. 1-12). Pham et al. also show apertures on the first and second sides of the cover that make portions of the side surfaces of the microplate visible when the cover is engaged with the microplate (see FIGS. 57-11, 127, 129, and 130). Wlodarski also shows apertures on the first and second sides of the cover to allow viewing of the side surface of the microplate when the cover is engaged with the microplate (see FIG. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Hall et al. in view of Sakabe et al. to include at apertures on the first and second sides of the cover as in Warhurst et al. or Pham et al. or Shumate et al. or Wlodarski to enable viewing of contents in the microplate when the cover engages the microplate.

Response to Arguments

5. Applicant's arguments filed 11/3/2003 have been fully considered but they are not persuasive.

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6. Applicant submits that Hall et al. do not disclose a pressure plate for dispersing a compressive force in a generally uniform manner across the layer of material. Applicant further states: To the contrary, Hall et al. disclose a cover for applying pressure to the layer of material or the gasket and sealing a multi-well plate without the need for a pressure plate. By suggesting the cover itself is sufficient to provide the force necessary to seal the gasket against the wells of the multi-well plate, Hall teaches away from use of the pressure plate in such an assembly.

7. It is noted that Sakabe et al. provide motivation of using the pressure plate as a heat-distributing plate, which might be desired or required in assays with temperature restrictions, in addition to sealing the wells to prevent contamination. The device of Hall et al. might suggest the cover itself without the pressure plate is sufficient to provide the force necessary to seal the gasket against the wells of the multi-well plate; however, it does not bar one from improving or increasing the seal of the wells by adding a pressure plate to impose greater pressure onto the layer of material. Improving or increasing the seal of the wells means decreased likelihood of contamination and evaporation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (571) 272-1261. The examiner can normally be reached on M-F (8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elizabeth Quan
Examiner
Art Unit 1743

eq


Jill Warden
Supervisory Patent Examiner
Technology Center 1700